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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

June 28, 2011

TO: Internal File

THRU: Daron Haddock, Permit Supervisor 

FROM: Ingrid Campbell, Lead 

RE: Incidental Boundary Change, West Ridge Resources, West Ridge Mine, Permit C/007/0041 and Task ID #3864

SUMMARY:

On June 27, 2011, the Division received an application from West Ridge Resources for an incidental boundary change (IBC) for the West Ridge Mine. The IBC would allow for a 10.33 acre expansion of the permit area. The IBC is necessary to allow the mine to continue longwall development in the newly acquired federal lease modification and the adjacent SITLA lease. Only a very small portion of the 10.33 acre IBC will be undermined, and no surface impacts are anticipated.

The IBC is located in section 31, SW Lot 4 of T13S, R14E. The BLM provided approval of the associated longwall panel (#23) in the R2P2 which is located in 5-3D of the application. This analysis includes limited technical analysis due to the small size of the proposed undermined portion of the IBC and the location of the undermined area in relation to approved panel #23. Longwall panel #23 was previously approved by the Division in the Penta Creek Fee Lease Modification. This IBC will add a very minute portion of that longwall panel to the permit area.

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TECHNICAL ANALYSIS:

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

Emily P. Marston and Leonard J. Pagano were added to Contiguous subsurface owners on page 1-4. All interest information is located in Chapter 1 and was approved in previous applications. This section includes (as required by R645-301-112):

- A statement that West Ridge Resources (WRR) is a corporation
- The name, address, telephone number, and EIN of the Applicant and resident agent
- A statement that WRR will pay the abandoned mine land fee
- Each person who 'owns or controls' WRR.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

Right of Entry information is located on page 1-5 and appendix 104 of Chapter 1 of the M&RP. West Ridge Resources Inc. currently holds 5256.16 acres of federal coal. WRR currently holds 2162.34 acres of state coal and 1189.84 acres leased on contiguous private fee coal lands. The total permit area is 7326.95 acres. The use permits for right of entry are listed on page 1-6 of Chapter 1 of the MRP and proof of lease assignments is found in appendix 1-4. None of the lease assignments are subject to litigation.

Findings:

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The information provided is considered adequate to meet the minimum regulatory requirements for this section.

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The permit is effective on June 28, 2011 and expires on April 1, 2014. The permit area description on page 1-15 of the MRP was amended to include section 31, SW Lot 4 of T13S, R14E.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

The application is necessary for mining to continue in longwall panel #23. The BLM approved mining of this panel in the R2P2 located in Appendix 5-3D of the MRP. The Division has reviewed the information required and located in the M&RP in previous IBC applications. This review included administrative, hydrology, biology, engineering, land use, and archaeology. Please see tasks 3608, 3583, 3368 for reviews of the impacts from these IBC's as well as the current 10.33 acre IBC.

Findings:

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The information provided is considered adequate to meet the minimum regulatory requirements for this section.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

Analysis:

A cultural resource report was included in the confidential section of the application. The report was prepared by John Senulis of SENCO-PHENIX Archeological Consultants on April 25, 2011. The report (SPUT 612) included a file search of the proposed IBC area conducted online at the Utah Division of State History and at the Price River Field Office Bureau of Land Management. No sites were located in the IBC area.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

OPERATION PLAN

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

The following review was taken from James Owen's memo for the Penta Creek Fee Lease Modification dated March 1, 2011. The Penta Creek Lease modification includes Panel 23 except for the very small portion that this IBC covers. This subsidence review will suffice for this IBC due to its proximity to the previous lease modification and its small size.

"In its subsidence control plan (pg 5-26), the applicant commits to adopt measures which are technologically and economically feasible to prevent subsidence under areas to be protected and to provide for planned controlled subsidence in all other areas. All material damage will be corrected to the extent technologically and economically feasible.

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The Grassy Trail Reservoir, which impounds more than 20 acre-feet of water, is located within and adjacent to the permit area. Plans are in place to the reservoir to be moved and reconstructed so as to allow for mining to take place within the Penta Creek Extension. A previously mined panel, 7, is the closest longwall panel to Grassy Trail Reservoir, located approximately 995' from the reservoir measured horizontally. The panel is also 1664' below the reservoir.

West Ridge Resources contracted with RB&G Engineering to prepare a study of the risk to Grassy Trail reservoir from seismicity and subsidence associated with longwall mining in the West Ridge Mine. The study involved the collection of additional data from newly-installed accelerometers, subsidence monitoring stations, and piezometers in the area around the dam. Another phase of the study was done for compliance with the regulatory requirements of the Utah Division of Dam Safety. Appendix 5-11 of the application is the Grassy Trail Dam & Reservoir Mining – Induced Seismicity Report. Appendix 5-12 is the Grassy Trail Dam & Reservoir, Phase II Dam Safety Study.

The seismicity report addressed the issues of dam stability analysis, subsidence, internal erosion potential, reservoir seepage and landslide potential. The report concluded that it is unlikely that the anticipated mining induced seismicity will impact the performance of the dam and reservoir.

Based on the approval of the mine plan concerning the full extraction of panel #7, the panel was extracted in December of 2005. Extraction closest to the Grassy Trail Reservoir occurred in March of 2006. Based on recommendation from the RB&G Study, a monitoring program was put in place and flowed throughout the process of mining panel #7. The monitoring system included:

- Bi-weekly site inspection to observe embankment crest and slope stability. Cracking, ground deformation, and seepage were also monitored.
- Monthly measurements of ground and water motion devices.
- Annual surveys of control points on the embankment and landslide areas
- Daily monitoring of the UUSS list of recent seismic events. Daily records were to be maintained. Events of interest would be properly reported within 24 hours of the event.
- Site inspection reports must be submitted to RB&G Engineering and the Utah Division of Dam Safety within 24 hours. Daily monitoring reports submitted monthly.

Monitoring, as described above, was conducted during the mining of panel #7. As expected, there was no mining related damage to the dam, although some "slumpage" of an adjacent hillside was observed, which resulted in minor movement of the west abutment of the dam. The applicant states that there was no loss of integrity of the earthen structure of the dam.

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The applicant commits to a similar but more complete and more frequent monitoring will be conducted for Block 18-20.

In January of 2008, RB&G prepared a post mining Summary Report of the mining induced seismicity. This report is included within the Appendix 5-16 of the application. Monitoring of the dam continued after mining of panel #7 was complete. In September 2010, RB&G Engineering prepared a summary report of the subsequent mining induced seismicity. The report is included with the application in Appendix 5-17.

As part of the mining process, the applicant has implemented a panel-barrier mining design that leaves a 400' wide barrier between each longwall panel. This design was not in place during the mining of panel #7. This system will be used during the mining of panels 18, 19, and 20 (the extension panels). The closest mining from Block 18-20 will be more than 3000' feet away from the dam horizontally and will be 2200' feet below the dam.

The Subsidence Control Map (5-7) shows a future subsidence monitoring station between Block 18-10 and the Grassy Trail Reservoir.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

RECOMMENDATIONS:

This Incidental Boundary Change is recommended for approval.